12-9-1974

Design of a Portable Wind Generator

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PORTABLE WIND GENERATOR

A Report to
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December 9, 1974

TABLE OF CONTENTS

	Page
Letter of Transmittal	iii
Abstract	iv
Introduction	v
Discussion	1
Blade Design	1
Power Drive Design	3
Electrical Design	6
Manufacturing	8
Conclusions and Recommendations	9
Appendix A - Bibliography	10
Appendix B - Testing	11
Appendix C - Supplementary Mathematical Data	20
Appendix D - Cost Estimate	27
Appendix E - Photographs	28

LIST OF ILLUSTRATIONS

Figure 1 Sprocket Diagram	4
Figure 2 Pitch Diagram	5
Figure 3 Alternate Units	6
Figure 4 Wiring Circuit	7
Figure 5 Changing A.C. to D.C. Voltage	7
Figure 6 Alternator Test Graph.	12
Figure 7 Alternator RPM vs. Alternator Torque Graph	15
Figure 8 Torque of Alternator vs. Torque of Blade Graph	16
Figure 9 Wind Speed vs. Torque of Blade Graph	17

ABSTRACT

This research on the design of a Wind Generator indicated that there are three main areas of design to be considered. The first area, and most important, is blade design. Since the power in the wind is low, the blade must trap this power and convert it to mechanical power called torque. The second area is the power drive design. It's purpose is to convert torque at a low rpm and step-up the rpm to a useful speed. The third area is the electrical design, this will convert mechanical power to useable electrical power.

The Wind Generator was first designed with a V-belt drive, then redesigned with a chain drive. Both methods will work if enough torque is produced by the blade, that was the main problem in the designs. The Wind Generator can effectively be used to generate current to charge a storage battery, but alterations in blade design is warranted.